

### ABSTRACT

A three-phase transformer and a method of its manufacture are presented. The transformer comprises a magnetic circuit and three coil blocks. The magnetic circuit comprises two spaced-apart, parallel, plate-like elements; and three spaced-apart, parallel column-like elementary circuits. Each of the column-like elementary circuits carries the corresponding one of the three coil blocks, and serves for the corresponding one of the three phases. The column-like elementary circuits are substantially perpendicular to the plate-like elements, and are enclosed therebetween such as to form a spatial symmetrical structure about a central axis of the transformer. Each of the column-like elementary circuits is substantially a toroid in the form of a multi-layer structure formed by winding a predetermined number  $N$  of packages of magnetic strips about a central axis of the toroid, each package being composed of a predetermined number  $n$  of layers formed by  $n$  strips placed on top of each other.